

ICT

Preparation book

5th Prim



2024 - 2025



Teacher's Biography

Name:

School:

The educational administration:.....

Qualification:

Teaching Subject:

Comprehensive School:

The school to which he is delegated:

Date of appointment:

The job is on the staff:

Teacher Code:

Mobile Number:

Teacher

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Supervisor

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School Principal

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Daily Class Schedule

Period Day	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth
Saturday									
Sunday									
Monday									
Tuesday									
Wednesday									
Thursday									

Period Day	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth
Saturday									
Sunday									
Monday									
Tuesday									
Wednesday									
Thursday									

Teacher

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Supervisor

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School Principal

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The specific objectives of computer and information technology

- **Providing** students with the appropriate amount of scientific and basic knowledge and skills related to how to solve problems
- **Develop** basic scientific thinking skills
- **Gaining** the ability to use technical means , multimedia, and networks and employing them as tools to serve and integrate with different fields of study
- **Training** students to work in a team by practicing computer techniques
- **create** Websites and define their properties
- **Developing** students' awareness of the importance of technological awareness and cultural communication
- **Acquisition of** concepts of the principles of designing web pages
- **appreciation** of the role played by science and scientists
- **recognize** On the suite of Microsoft Office programs
- **Raising** students' awareness of the concept of information ethics and the rules of safe use of the Internet
- **It collects** data and presents it in an interesting way

Teacher

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Supervisor

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School Principal

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The specific objectives of computer and information technology

- **Identify** some technology used to explore the earth.
- **Explain** the different terms for technology.
- **Discuss** the history of ICT.
- **Discuss** How to use Technology in our daily life.
- **Explain** the main components of a computer system.
- **Explain** the basic functions of operating systems and software
- **Realize** the importance of the operating system of a computer
- **Explain** the definition of assistive technology
- **Discusses** how technology is improving the lives of people of determination
- **Suggest** a technology that can contribute to improving the lives of others
- **Discuss** the problems he has experienced at school or at home.
- **Suggest** solutions to common ICT problems.
- **Explain** why technological solutions must match people's lives
- **Describe** online risks and dangers.
- **Explain the** importance of keeping personal information privacy.
- **Discuss** the method of choosing words key to be used in the research Online
- **Realize** the importance of search engines for children
- **Define** the characteristics of sources reliable online sources.
- **Describe** reliable sources of information and unreliable online.
- **Explain** the purpose of Egyptian knowledge bank.
- **Describe** the role of control management Internet crimes
- **Realize** importance of creating strong password.
- **Discuss** the importance of good anti-viruses software.
- **Identify** an important topic to raise awareness.

Teacher

Supervisor

School Principal



Distribution of the content of computer, Information Technology and communication For the 5th primary grade – First term for year 2024-2025

The first axis: (The role of information and communication technology in our lives)			
1		Lesson 1	Active Explorer) Fred Hibbert)
		Lesson 2	Computer accessories
2		Lesson 3	Networks
		Lesson 4	Digital communication tools
3		Lesson 5	Internet connection problems and solutions
		Lesson 6	Digital file management
4		Lesson 7	Information search strategies
		Lesson 8	Share information
5		General review on the first axis	
The second axis: (Digital safety and security precautions)			
6		Lesson 1	Active explorer)Jeff Kirby)
		Lesson 2	Protecting ourselves and our information
7		Lesson 3	Password security
		Lesson 4	How to deal with fake websites
8		Lesson 5	Intellectual property rights
		Lesson 6	Use of digital sources
9		Lesson 7	Advanced searches
		Lesson 8	Document the information appropriately
10		General review on the second axis	

Teacher

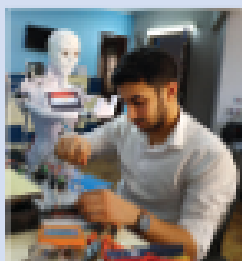
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Supervisor

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School Principal

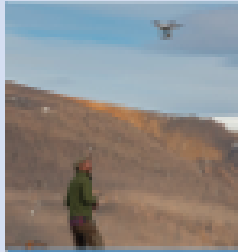
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THEME 1 Role of Information and Communication Technology (ICT) in our lives

Essential Question: How can we use ICT tools together, even when we're in different places?

LESSON	TOPICS	SKILLS INTEGRATION		
		Life skills	Values	Issues and challenges
LESSON 1 Explorer in Action	<ul style="list-style-type: none"> How archaeologists use ICT to share information Different ways to record information 	Learning to do: decision-making	Academic values: appreciation of technology	Globalization issues: technological awareness
LESSON 2 Computer accessories	<ul style="list-style-type: none"> Basic computer hardware concepts Common computer problems 	Learning to do: decision-making	Academic values: perseverance	Globalization issues: technological awareness
LESSON 3 Networks	<ul style="list-style-type: none"> Different types of networks How computer technology has advanced from the 80s to today 	Learning to know: critical thinking Learning to live together: communication	Work values: curiosity, appreciation of science and scholars	Globalization issues: technological awareness
LESSON 4 Digital communication tools	<ul style="list-style-type: none"> How people communicate using computer networks Basic scientific concepts relating to ICT tools How computer networks help people of determination 	Learning to live together: communication Learning to be: sharing	Academic values: appreciation of technology Personal values: independence	Globalization issues: digital citizenship, civilizational communication
LESSON 5 Internet connection problems and solutions	<ul style="list-style-type: none"> Common ICT issues How to troubleshoot problems using a process 	Learning to do: decision-making Learning to know: problem-solving	Academic values: perseverance	Globalization issues: technological awareness
LESSON 6 Digital file management	<ul style="list-style-type: none"> Different device accessories File systems How to organize information 	Learning to be: self-management Learning to know: creativity	Personal values: independence	Globalization issues: digital citizenship
LESSON 7 Information search strategies	<ul style="list-style-type: none"> How to plan effective searches Using keywords and subtopics 	Learning to do: decision making Learning to know: critical thinking	Academic values: curiosity Citizenship values: participate in scholarly research	Globalization issues: digital citizenship, technological awareness
LESSON 8 Sharing information	<ul style="list-style-type: none"> Posting information on an intranet / the internet How to share information on spreadsheets 	Learning to live together: communication Learning to do: decision making Learning to know: critical thinking	Work values: perseverance Personal values: independence Citizenship values: participate in scholarly research	Globalization issues: technological awareness



THEME 2 Digital safety and security precautions

Essential Question: How do we keep ourselves and our data safe and secure when using ICT tools?

LESSON	TOPICS	SKILLS INTEGRATION		
		Life skills	Values	Issues and challenges
LESSON 1 Explorer in Action	<ul style="list-style-type: none"> • Copyright in relation to photographs • Importance of backing up photograph files 	Learning to do: decision-making	Academic values: appreciation of technology	Globalization issues: technological awareness
LESSON 2 Protecting ourselves and our information	<ul style="list-style-type: none"> • Protecting personal information and data • Backing up data 	Learning to be: communication	Personal values: independence	Citizenship issues: legal awareness
LESSON 3 Password security	<ul style="list-style-type: none"> • The importance of password protection • Using multi-factor authentication 	Learning to know: critical thinking	Work values: proficiency	Globalization issues: technological awareness
LESSON 4 How to deal with fake websites	<ul style="list-style-type: none"> • Identifying who can help with problems with websites 	Learning to know: critical thinking	Work values: proficiency	Citizenship issues: legal awareness
LESSON 5 Intellectual property rights	<ul style="list-style-type: none"> • What copyright means • When to attribute a creator's work 	Learning to do: communication, self-management Learning to live together: empathy	Work values: respect	Citizenship issues: legal awareness Globalization issues: digital citizenship
LESSON 6 Using digital sources	<ul style="list-style-type: none"> • Identifying reliable websites to use as research sources • Using multiple sources 	Learning to do: decision-making	Work values: transparency and integrity	Globalization issues: technological awareness
LESSON 7 Advanced searches	<ul style="list-style-type: none"> • Specific and accurate online search terms • Search engines and advanced searching tools 	Learning to do: productivity	Scientific values: curiosity Work values: proficiency, perseverance	Globalization issues: civilizational communication
LESSON 8 Documenting information appropriately	<ul style="list-style-type: none"> • Paraphrasing online content • How to quote online content • How to cite online sources 	Learning to do: decision-making, productivity	Work values: proficiency	Citizenship issues: legal awareness

Date						
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Session						

First Axis (The role of ICT in our lives) Lesson 1: The Active Explorer "Fred Hiebert"

Lesson objectives: By the end of this lesson the student will be able to:

- **Give** Examples of how to share information
- **Determine** ways to record information
- **Communicate and exchange** information with his colleagues through an educational platform

Strategy:

Brainstorming - dialogue and discussion

Teaching aids:

The electronic board- Student's book - an introduction video by Fred Hiebert

Warm Up :

What ICT tools do you use regularly?

Lesson Presentation



Fred Hiebert:

He is an archaeologist and explorer he studied the past by **excavating**, **observing** and **writing** about objects and sites

Tools Mr.hiebert used in his daily work:-

Word processor program: to write reports

Excel spreadsheet program: to prepare and show graphs.

PowerPoint presentation program: to present results of his research to his team

Mr.Hiebert communicate formally through:-

1. Printed letters
2. E-mails
3. Handing over documents in person.

→ Mr. Hiebert generally prefers to **communicate** with people through face-to-face, in-person meetings. At times, this is not possible because he is away on an expedition, or the people he is meeting with are in different countries. In such cases, Mr. Hiebert holds virtual meetings using platforms like Zoom and WhatsApp.

□ These meetings have to be scheduled at a time that is suitable for everyone, which can be difficult due to time difference between countries.

• **Mr. Hiebert is also a Mentor** who guides his colleagues around the world.

• **Mentoring:-**

Is advising or training someone on subject you have a lot of experience in

• **Sharing information**

become vital in our day-to-day lives. Technology helped to make it easier. satellite broadcasting channels (**educational channels**) affiliated by the Ministry of Education and YouTube channel, "**Madrasitna**". On the **YouTube channel**, there are videos on each school subject. This provides a second opportunity for students who missed a lesson, need further explanation of a lesson, or would just like a quick review. "**Madrasitna**" is an opportunity for students to watch lessons whenever they choose

Evaluation : Put (✓) Or (X):

Technology has helped to make this an easier task. ()

Date						
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First Axis (The role of ICT in our lives)

Lesson 2: Computer accessories

Lesson objectives: By the end of this lesson the student will be able to:

- **Describe** basic computer/accessories concepts.
- **Describe** common computer problems
- **Explain** how to solve some common computer problems

Strategy:

Role playing - problem solving - dialogue and discussion

Teaching aids:

Electronic whiteboard- Student's book - presentation

Warm Up :

What can a computer do? How does the hardware enable it to do these things?

Lesson Presentation



- **Flash Memory:** It is used to transfer files and data from one computer to another.
- **Ethernet Cable:** It is a cable that connects your computer or laptop to the router.
- **Router:** It is a device that connects your computer to the Internet via Wi-Fi or Ethernet
- **Ethernet Port:** Connects an Ethernet cable and Ethernet is the most stable and faster
- **External Hard Drive:** It is like a hard disk drive but it works better and faster.
- **HDMI (High Definition Multimedia Interface):** A cable transmits audio and video to and from devices.

Units of measurement:

Bit: the smallest unit of data (0 - 1)

Byte (B): 1 byte = 8 bits.

Kilobyte (KB): 1024 B

Megabyte (MB): 1024 KB

Gigabyte (GB): 1024 MB

Terabyte (TB): 1024 GB

Mbps (Megabits per second):

A unit of measurement used to measure the speed of a network or internet connection.

(GHz) Gigahertz:

A unit of measurement for the number of cycles your CPU carries out per second. The higher the number of cycles, the faster the processor can process data and convert it into information.

Problems while using the computer and solutions

Problem	Reason	Solution
1. Problem processing large files, like a PowerPoint Presentation	Not enough storage space	Close some programs
3. Not able to store files	Not enough space	Move old files to an external drive
4. Poor network connection during video conference	Weak and slow wireless internet connection	Try an Ethernet connection
Home Internet is not working	Connection interrupted	Use Ethernet or contact your ISP (Internet Service Provider)

Evaluation : Put (✓) Or (X):

You cannot solve any problem that may appear to us while using the computer()

Date						
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First Axis (The role of ICT in our lives)

Lesson 3: Networks

Lesson objectives: By the end of this lesson the student will be able to:

- **Explain** what a network is
- **Describe** the different types of networks
- **Explain** how far communication via computers and communication devices has advanced from the 1980s to today.

Strategy:

Teaching aids:

Warm Up :

Brainstorming - peer learning - dialogue and discussion

Electronic whiteboard - Student's book- presentation

What does the word network mean to you?

Lesson Presentation



→ **Networks**: Groups of people or things linked together for a common purpose

→ **The local network LAN**: A computer connected to another computer or a device such as a printer or router

→ **The Internet**: is a network that connects computers and the people who use that network from the whole world

⊗ **To connect your computer to the Internet, you need:**

→ **Gateway**: The router that connects your computer to an Internet service provider

→ **Internet service provider "ISP: Internet Service Provider"** ← Such as the Internet service provided by Egyptian companies to citizens

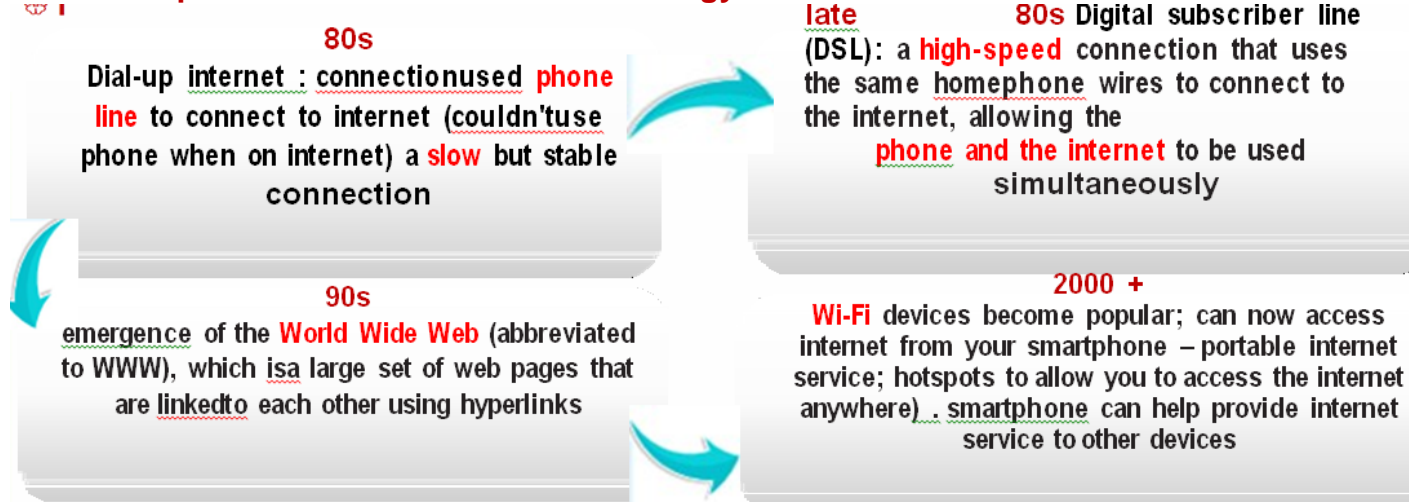
→ **World Wide Web (WWW)** A part of the Internet that consists of many web pages : such as **Egyptian Knowledge Bank**.



→ **Intranet**: The intranet differs from the Internet, as it is a private network that is limited to people who are connected to a specific work, school, or institution

Closed Network: It is a network available to specific individuals and contains computers Network connected by → "wires" **Cables** They are long connectors: Transfer data or power between hardware; Example: **ethernet wire**

The development of communication technology:



Evaluation : Complete:- The World Wide Web appeared in.....

Date						
Class						
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First Axis (The role of ICT in our lives)

Lesson 4: Digital communication tools

Lesson objectives: By the end of this lesson the student will be able to:

- **Describe** different ways that people can use computer networks to communicate
- **Explain** basic concepts related to IT tools
- **Understand** the importance of networks in facilitating daily life

Strategy:

Teaching aids:

Warm Up :

Brainstorming - dialogue and discussion - creative thinking

Electronic whiteboard - Student's book- presentation

How do you feel about talking to your friends face to face?

Lesson Presentation

We communicate every day using computer networks when we use phones to:

sending messages text ... Take lessons online ... Download video running applications or programs.

→ Companies and organizations also use **networks** every day to share information

⊗ **Internet of Things** connected You can control it, whether it is connected to the **It** consists of devices : Internet via Wi-Fi . In the same room or in another city

→ **Some examples of that: Bluetooth speakers** used to listen to music Home

appliances, such as a digital refrigerator or a digital washing machine, can be operated

And turn it off using an application dedicated to this matter

→ technology with **Bluetooth technology: Network** connects mobile devices short range wireless to form a data transmission **network**. between different devices

→ **Networks and People of Determination:**

⊗ **Networks** give people People of determination have more independence.

⊗ This independence helps them save money and time, and helps them increase their productivity their level of self-confidence.

⊗ **Egyptian Knowledge Bank** provided them, Because it contains a lot of information.

⊗ It provided them with **electronic commerce**, where **electronic shopping** is the purchase of items over the Internet, but you have to take permission from parents, and you have to **remember digital privacy** when giving your information for safety and protection.

Website: A large group of web pages that you link to each other using hyperlinks.

Screen readers for the visually impaired are provided **Screen Readers** for **Audio Feedback** To help him **read. in the "Braille" way.**



Evaluation : Complete:

When you do online shopping, you must take permission from.....

Date						
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First Axis (The role of ICT in our lives)

Lesson 5: internet connection problems and solutions

Lesson objectives: By the end of this lesson the student will be able to:

- **Describe** common ICT issues.
- **Come up** with solutions to common ICT problems
- **Explain** how following a process helps me to troubleshoot problems. Problem solving - practical training - dialogue and discussion

Strategy:

Teaching aids:

Warm Up :

What issues have you run into with ICT tools?

Lesson Presentation

How to solve problems that appear while using the computer

1. **Identify** the problem What's the issue? Is it a hardware or software problem? Have you committed an error that causes the problem?
2. **Think about and plan different ways you might solve the problem.**
3. **Go through** your potential solutions to the problem. Try each one until you find a solution or get to your final idea without solving it.
4. **Which solution worked?** If you didn't solve the problem, what did you learn while trying? How can what you learned help you the next time you try to solve a problem?
5. **If you do not find** a solution to the problem, you should ask your teacher or a member of your family for help.



→ **Following a process** when troubleshooting will **help you** find different ways to solve problems. An idea you came up with that didn't work for a particular problem may work for another.

Common PC Problems and Possible Solutions

Problem: The PC is slow when opening an application

Possible solutions: it down and restart it; check for software updates; Delete some unwanted applications.

problem: Search engine is running slow

Possible solutions:- check the **Wi-Fi** connection ; Make sure the apps on your device are updated.

Problem: No internet connection

-Possible solutions: Use the software to troubleshoot connectivity issues **Wi-Fi** And solve it. Ensure that the router Connected; restart the router; Try an ethernet new cable; Contact the customer service of the company that gives you Internet service provider ISP to get help.

problem: Slow loading

potential solutions:- restart your computer and router; Check internet speed

Evaluation : **Complete** : No internet connection Make sure that is online

Date						
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First Axis (The role of ICT in our lives) Lesson 6: Digital file management

Lesson objectives: By the end of this lesson the student will be able to:

- **Describe** different device accessories.
- **Describe** digital file management
- **Explain** how to organize information

Strategy:

Teaching aids:

Warm Up :

Cooperative learning - dialogue and discussion - practical training

Electronic whiteboard - Student's book- presentation

What is the best way for you to keep your schoolwork, toys, photographs, and clothes organized?

Lesson Presentation

✂ **Where do students find information?**

Internet search: obtaining a huge amount of information from reliable sources such as the Egyptian Knowledge Bank.

Libraries: It contains a lot of books and articles in various fields.

Television: A device through which a lot of information can be displayed.

QR code: It is a code to output the information on the systems by pointing the device's camera at the code

Direct interviews : It is a face-to-face meeting between two people to exchange experiences and information

✂ **How do you save and store information?**

Flash memory: used to store and transfer data and information

Scanner : Entering pictures and graphics to the computer and saving them as files

Digital camera: To take photos and videos and store them on a memory stick



Files management using tools information and communications technology- :

← **The file is:-** A set of data)audio - image - video – text)

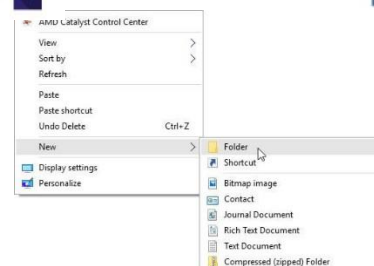
← **A folder is:-** A collection of files and subfolders.

← **Create a new folder:-**

- Right-click the location where you want to create the folder
- Choose **New command**.
- Then choose New **Folder**.from the submenu

Each folder and file should be labeled and each content should be placed in its correct folder

Evaluation : **Complete :** Uses.....to organize files



Date						
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First Axis (The role of ICT in our lives) Lesson 7 : Information search strategies

Lesson objectives: By the end of this lesson the student will be able to:

- **Explain** how planning effective searches aids in online research.
- **Discuss** how using keywords and subtopics can increase the accuracy of search results
- **Explain** the useful strategies when performing online research and recording results.

Strategy:

Teaching aids:

Warm Up :

Brainstorming - dialogue and discussion - critical thinking

Electronic whiteboard - Student's book- presentation

What are strategies you use or would use when searching for information online?

Lesson Presentation

- When you search for information, you are actually building **knowledge**. Therefore , **it is important to**

- Plan** your search
- Analyze** and check the information you have found
- Evaluate**, select and organize information
- Decide** exactly what Information you want



The Internet contains a huge amount of information And you have to specify Accurately the information you seek to reach, in addition, many information needs The initial information you find during your research will need to undergo **processing and organizing the information** before you complete your work

Here are some suggested steps to do an effective and good search:-

- Choose** a topic to search.
- Divide** the search topic into smaller subtopics.
- Determine** what you know about the search topic and what you lack
- Decide** who is going to search for which Information.

It is good for two classmates to search for the same information and share their results.

- Select** keywords for the search topic. Do not write full sentences when searching.
- Share** your search results then select and organize the Information for a Presentation.



→ It is preferable for two colleagues to search for the same information and share the results of their research

Evaluation: Put (✓) Or (X):

It is good practice for two people to search for the same information ()

Date						
Class						
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First Axis (The role of ICT in our lives) Lesson 8: Sharing Information

Lesson objectives: By the end of this lesson the student will be able to:

- **Explain** when I might choose to post information on an intranet.
- **Discuss** when I might choose to post information on the internet.
- **Explain** how to share info on spreadsheets.

Strategy:

Teaching aids:

Warm Up :

Brainstorming - dialogue and discussion - practical training

Electronic whiteboard - Student's book- presentation

What are different ways you can share information with others, both in person and online?

Lesson Presentation



✂ **Communicating with ICT tools** When sharing information online, you must decide which information should be shared using an **intranet** network or the **internet**.

✂ **Sharing information through the intranet:**

Intranet is used to share in a closed network and is more secure. **Examples** of such information □ your personal data - your research - your files



✂ **Sharing information through the Internet** The **Internet** is used to share information over the network. global, which is **less secure** This information may be at risk.

Examples of such information □ government decisions - general news – advertisements



✂ **Using Microsoft Excel**

→ Sorting info in alphabetical order: Go to the toolbar and click on Data. Then click on **Sort**.

→ You can set formulas in cells to add (+), subtract (-), multiply (x), or divide (/):

Click on the cell you want to set a formula. Type "=". This tells Excel you are creating a formula.

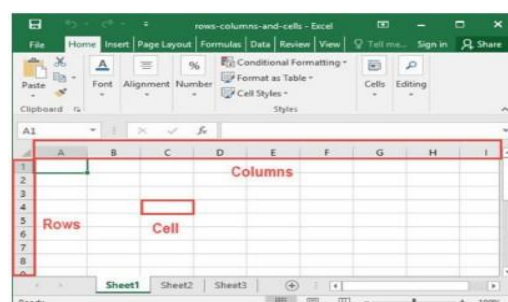
→ Decide which cells are in your formula. Reference the letters (top of columns) and numbers (numbers to the left of the rows).

→ For example, let's say you want to add the data from columns A, B, and C, row 8. You would type the following in the cell that will create the formula: **=A8+B8+C8**

→ **Let's say** you wanted to add numbers from the same column (A), but different rows (4-6). The column information would still come first: **=A4+A5+A6**

Evaluation : Put (✓) Or (X):

Internet is used to share in a closed network
and is more secure ()



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General review on the first axis (The role of ICT in our lives)

Lesson objectives: By the end of this lesson the student will be able to:

- **Mentioned** Fred Hebert Tools for Information Sharing.
- **Practicing** some skills in dealing with computer and internet problems.
- **Compare** different types of networks

Strategy:

Teaching aids:

Warm Up :

Brainstorming - dialogue and discussion - cooperative learning
Electronic whiteboard - Student's book- presentation

After what you learned in the first axis How can information And communication technology be used together, even when we are in different places?

Lesson Presentation

Write and compare

Write a sentence for each of the following pairs of phrases to explain the connection between them, then compare your sentences with the sentences of a colleague.

- 1) Networks and the Internet of Things
- 2) folder and file

Read and answer:

How does Fred Hebert share information? What would happen if I opened too many apps at the same time? Provide an example of a computer network? Share a way you can use computer networks to communicate? What does it mean to follow a certain procedure?

Mention three accessories of electronic devices? Write an example of a search entry using the Boolean search method ? What information can be included in a spreadsheet?

Evaluation : Evaluate the students' answers



Axis 2



2

2024 - 2025

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Second Axis (Digital safety and security precautions)

Lesson 1 : Active Explorer (Jeff Kerby)

Lesson objectives: By the end of this lesson the student will be able to:

- **Explain** the importance of copyright protection.
- **Planning** a photography expedition
- **Identify** some technological problems and ways to solve them

Strategy:

Active learning - dialogue and discussion

Teaching aids:

The Student's book - the electronic whiteboard - an introductory video by Jeff Kirby.

Warm Up :

How do you plan a trip to another city? What do you take with you?

Jeff Kerby:

- He is an **ecologist** and a **photographer**.
- Mr. Kerby photographs **landscapes** and **animals**.
- He has worked on exciting photography expeditions in **Africa**, **North America**, and the **Arctic** expeditions to places where one takes pictures.

Jeff Kerby prepares for his trips:

1 **Think exactly** (where he is going what he is going to do there, and how he will carry out his work **securely**)

2 **ICT Tools Kerby uses:**

- Digital Camera - Phone to take quick photos - Laptop - Drone
- GPS Mapping Tool to navigate - Two External Hard Drives - Hard Drives

Owning Photos:

It means having the legal right, or copyright to publish or sell the photos.

Copyright Infringement:

Some people use photos that were taken by others without asking permission .

Photographers can protect their work from Copyright Infringement by many ways:

Place a watermark on their photos. - They add copyright as their name for each photo.



What did the scientist Jeff Kerby do to protect his works from copyright infringement?

- Only shares **low resolution** photos that do not look good if printed or uploaded to a website.
- Sharing his **high resolution photos only** with people he **trusts**.
- Use the **image** search to find out which images are being used without his permission.

Remember:

- Copyright Infringement is against the Law.
- Article 69 in the 2014 Egyptian Constitution confirms that the state protects all types of intellectual property in all fields.



	Old Film Camera	Digital Camera
Advantages	<ul style="list-style-type: none"> - Less expensive - Its quality is higher than that of a Digital Camera - It performs well in low light - High cost of printing photos 	<ul style="list-style-type: none"> - The ability to take and view thousands of photos - Possibility to take Video Clips Pictures can be modified and deleted - The ability to connect to a computer, lightness weight.
Disadvantages	<ul style="list-style-type: none"> - Take a few photos by size the movie in the camera Cannot take videos - Pictures cannot be modified 	<ul style="list-style-type: none"> - More expensive - Poor performance in low light 

Evaluation : **Complete** It means having the legal right to publish the photos

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Second Axis (Digital safety and security precautions)

Lesson 2 : Protecting ourselves and our information

Lesson objectives: By the end of this lesson the student will be able to:

- **Describe** the importance of protecting personal information.
- **Explain** the importance of data backup
- **Explain** ways to protect personal information and data

Strategy:

Research and discovery – Dialogue and discussion - Collaborative learning

Teaching aids:

Student's book- electronic board - presentation

Warm Up :

Why is it important to protect the data on a computer or other device?

Lesson Presentation

❁ Personal Identifiable Information (PII)

It means your name, address, date of birth and your passwords.

❁ Hackers Risks:

- 1 Stealing Personal Information
- 2 Using someone's email address and password to send a virus your frier
- 3 Using someone's account number to take money from that account.

❁ Keep your PII safe:

- 1 Do not share your personal Information on the Internet.
- 2 Do not sign for a website if it asks for too much Personal Information.
- 3 Use different strong passwords that contain letters, numbers and special signs and are different for each website.
- 4 Use Antivirus program on all of your devices.
- 5 Update your devices regularly. The updates include changes that keep your data safe.

❁ Files may be lost by:

Viruses

1. Software Problems
2. Human errors such as dropping and breaking your laptop.

❁ How can you protect your files from being lost?

Some applications and programs backup data automatically.

❁ Hybrid Backup:

means **using a data storage device** that you attach to your computer such as Flash Memory or External Hard Drive or to a Network.

- **It is a safer way to backup and store files.**

An external hard drive is a safer way to copy files Save them and the largest space of flash drives

Evaluation :

Put (✓) Or (X):

To maintain the security of your information ,you must limit your personal information on the Internet ()



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Second Axis (Digital safety and security precautions)

Lesson 3 : Password security

Lesson objectives: By the end of this lesson the student will be able to:

- **Understand** the importance of password protection.
- **Explain** the purpose of a password manager
- **Discuss** how to use multi-factor authentication to protect data and accounts

Strategy: Cooperative learning - presentation and discussion

Teaching aids: The Student's book- the electronic whiteboard - the presentation - flashcards for a group of correct and incorrect passwords"

Warm Up : How many different passwords do you use on your devices and online?

Lesson Presentation

- There are many ways Hackers can get your password, one way is called **Phishing**.

Phishing:

Phishing is sending a message via e-mail or social media applications for stealing your data and personal information.

Examples of Phishing scam:

- A message informing you that you have won a cash prize and asking you for your bank account details to get the prize.
- An attached file is installed on your computer for stealing data or asks you to enter sensitive Information such as bank account details.

Smishing

- is the same thing, but it is a text message instead of an email.

How can we identify phishing scams?

- It contains spelling and grammatical errors.
- Ask you for too much personal data.

Password Managers:

- You need strong passwords to protect your personal data from Hackers.
- A Password Managers creates a strong password for each of your accounts.
- It also tells you if the passwords you already have are too weak or if you have reused them.
- It can tell you if one of your passwords has been stolen online.

Multi Factor Authentication (MFA): مصادقة متعددة العوامل

- It is used to strengthen and back up your passwords
- To prevent hackers from accessing your account and data.
- If you log in to your account through a device other than your main device, you will immediately receive a message on your mobile phone.
- To make sure that you are the owner of the account and you are trying to access your account by using a code for several numbers.

Evaluation : **Complete:** There are many ways hackers can get your



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Second Axis (Digital safety and security precautions)

Lesson 4 : How to deal with fraudulent sites

Lesson objectives: By the end of this lesson the student will be able to:

- **Understand** what fraudulent websites are trying to achieve.
- **Explain** how to avoid fraudulent websites.
- **Identify** the people or organizations who can report website problems.

Strategy:

Exploration - dialogue and discussion - role-playing

Teaching aids:

Student's book- electronic board - present

Warm Up :

People often say "It is too good to be true!" Do you believe that?

Lesson Presentation

If you go online, visit new websites, and interact with new people, you need to be careful in those situations Scam Websites:

They are fake websites to obtain get your personal or financial data and try to hack you and your privacy such as:

User Name – Password – Bank Account Details – Credit Card Details

Examples of Scam Websites:

- **Fake Online Shopping Sites:** مواقع تسويق مزيفة They never send you the items you bought correctly.
- **Scareware Sites:** مواقع برمجيات التخويف Websites that say you have a problem and you need to download something.
 - **Sweepstakes Scam:** مواقع احتيال عبر الجوائز That offers you a prize that never comes.

Ways to avoid Scam Websites:

- Do not enter your personal data and information.
- Check for spelling errors and bad grammar, a trusted website will be with almost no mistakes.
- Do a search online before visiting it to see if it is a known scam.
- Check the Site Address URL (Uniform Resource Locator) of the website. **Victim of a Website:**
- Tell your parents or your teacher.
- Contact the child helpline or the General Department for Combating Internet Crimes.
- Report the Scam Websites to the Service Provider, the E-Commerce store and your bank with the help of your teacher or family.

Components of information sites or website "URL":-

- **Protocol:** It begins with the URL and determines how information is transmitted. Examples of it are (**HTTP-HTTPS**)
- **The name of the resource:** It is the network server or the requested website, and it shows who owns this website and ends with **.org, .NET, .COM**
- **File path :** represents the last part of the **URL** It specifies the name of the resource to which the electronic link grants access.

Evaluation :

Complete:offer you a prize that you will never get.

https://www.ekb.com/index.html

البروتوكول (Protocol) اسم المورد (Resource Name) مسار الملف (File Path)

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Second Axis (Digital safety and security precautions)

Lesson 5 : Intellectual property rights

Lesson objectives: By the end of this lesson the student will be able to:

- **Understand** what copyright means
- **Respects** the law when using information, devices, and networks.
- **Identify** when I need to attribute a creator's work.

Strategy:

Teaching aids:

Warm Up :

Brainstorming - dialogue and discussion - critical thinking

Student's book- electronic board - presentation

What would you think if someone took something you created and put it online without your permission?

Lesson Presentation

Digital content: Content you find on the Internet it may be e-books - pictures - programs - music and movies - websites.

Copyright law: Protects both print and digital content by giving creators and authors legal protection for works that they create (print and digital).

Copyrights: - The international symbol for copyright is the letter C with a circle around it ©. Copyright protects the works of creators and authors, and covers multiple types of creations and works as well as the phrase " **use copyrighted content** " at the bottom of the site.



What creative works are not covered by copyright?

Businesses classified as public property Facts , facts , discoveries ... - Creative works that have passed 50 years since the death of their owner.

Are there resources on the Internet that are not covered by copyright?

→ Sometimes the owner of the creative work gives permission to reuse his work at any time and any place, so we can use it freely, and it is called That **Creative Commons**.

→ **Egyptian law** also gives freedom to use creative works after 50 years of the death of the employer.

Written content: When preparing a research paper it is not permissible to use only a small part of the writings of the person from whom it will be quoted.



→ **There are two methods that can be used when using the writing of others** either transmitting the words as they are without changing (or) reformulating the ideas in your own style), and in both cases the names of the writers must be mentioned.

Images : also covered by copyright protection.

Public property : Creative works that are not covered by copyright and have a Creative Commons license , where we can use these sources without obtaining the permission of their owner.

Creative Commons license : means that the owner of the creative work has given permission to reuse his work at any time and in any place.

Evaluation : **Complete:** creative works not covered by copyright

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Second Axis (Digital safety and security precautions)

Lesson 6 : Using digital sources

Lesson objectives: By the end of this lesson the student will be able to:

- **Use** ICT tools and sources to support decision-making processes.
- **Differentiate** between opinions and facts in different sources
- **Explain** the different kinds of sources that can be used to conduct online research

Strategy:

Teaching aids:

Warm Up :

"Self-learning" - dialogue and discussion - practical training

Student's book- electronic board - presentation

What are the characteristics of a reliable online source?

Lesson Presentation

Use reliable sources

- The first step is identifying reliable digital sources that enable you to accomplish your research tasks.
 - Go to the site you want by typing **URL** "Uniform Resource Locator," in the search engine.
 - Often these websites are stored on a **bookmark** bar in browser
- **Facts** result from research and observation, and can be demonstrated. Unbearable Controversial facts, they apply to everyone.

→ **Opinions** It is based on a person's viewpoints and experiences prove it, but it bears controversy, and it does not apply to everyone.

Use multiple sources:

- It's a good decision to use multiple sources in your research.
- This helps make sure you know all important facts about topic **If two reliable websites include same information:**
- It means that the facts are true.
- Write notes for the first source, and then scan the next source for additional facts to add to your notes. **If two online sources have different information:**

- Double-check that both sites are reliable.

- Then make sure the information based on fact instead of opinion

- Following copyright rules and laws is also a good decision. **Archives and databases can be reliable sources:**

- They contain many types of research materials, including books, articles, diaries, letters, and photographs.

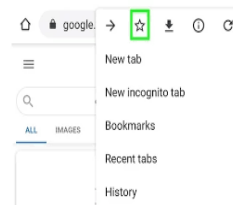
information that help us in our research:

- 1- Books, articles, notes and letters
- 2- Pictures and videos (visual information)
- 3- Maps, graphs, and infographics
- 4- Archives, records and databases

Evaluation :

Put (✓) Or (X):

Using multiple sources in your research is a bad decision ()



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Second Axis (Digital safety and security precautions)

Lesson 7 : Advanced searches

Lesson objectives: By the end of this lesson the student will be able to:

- **Choose** specific and accurate online search terms.
- **Use** search engines and advanced searching tools.
- **Identify** online sources that meet my research needs.

Strategy:

Critical thinking - direct dialogue - practical training

Teaching aids:

Student's book- electronic board - presentation

Warm Up :

Worldwide, how many internet searches do you think are completed every day?

Lesson Presentation

Accurate search terms :

- **Use specific search terms** Example (we write the construction of the Aswan Dam, not the Aswan Dam only)

- **Use Keywords**

Example (How many workers built the Aswan Dam) From the keywords we write "workers" or "Aswan Dam"

- **Use quotation marks to get specific results** Example: Instead of writing: the amount of time 13-18 year old spend on the Internet per day. We write "Children's time on the Internet."

Search Engines:

Search engines suggest keywords and similar searches . It has an advanced searching tool that helps you:

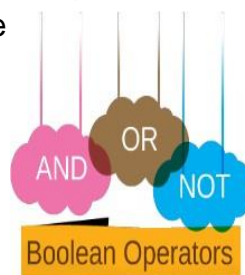
Limit search results Merge or exclude keywords or limit results to specific domains such as .gov or .edu **Logical operators and search modifiers**

- and _** The results will include **both words** .Example: video games and teens.
- or _** The results will include **one of the two words** . Example: a child or a teenager
- NOT _** **will not include** the words mentioned, eg: video games are not online
- " "** Results will include **the exact words mentioned** ex" :video games"
- ()** **The priority** in the results is between the brackets, forexample: (video games) and adolescents.
- *** The results will include all forms of the word eg :teenager*

When you get the search results:

- 1- Check the summary of each search result.
- 2- Search for titles related to the search topic and keywords in bold font (**BOLD**)
- 3- Find facts that answer your research questions within each result.
- 4- Select results that contain more than one of these items.
- 5- Read the source content and find the titles

Evaluation : **Complete:** To get results that include the exact words mentioned in the search, you can use



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Second Axis (Digital safety and security precautions)

Lesson 8 : Documenting information appropriately

Lesson objectives: By the end of this lesson the student will be able to:

- **Explain** how to take notes and paraphrase online content.
- **Identify** the reasons for quoting online content and how to do it.
- **Explain** how to cite online sources

Strategy:

Teaching aids:

Warm Up :

Cooperative learning – dialogue and discussion - practical training
Student's book- electronic board - presentation

Which do you prefer, taking notes on paper or using computer software? Why?

Lesson Presentation

When creating your research, you must:

- Take **notes** in your own style
- credit the sources you used in your research
- Add author's name and the URL
- Re-read your notes. and if you find missing information, return to the source and look for it Use quotation
- marks " " when the author's words are important

To search for information on the Internet by keywords:

- press my key **CTRL + F**
- Type the term in the search box
- The keyword you want to search for will be
- The keyword will be highlighted everywhere it appears on the page .

→ **Paraphrasing** إعادة صياغة النص :

- Use your own words to explain the idea of the author (writer)
- Arranging ideas, **sentences structure**, and changing some vocabulary words

→ **The quote** الاقتباس :

Repeat the words that someone (author or writer) else has said or written

→ **From the ethics of quoting** من أخلاقيات الاقتباس : credit the source from which the quote is taken and reason for using it - Use some terms and phrases such as

In this article Article title	This shows that
According to Author Name	This proves that
Author Name States ..	This illustrates

→ **Citing sources** الإستهتهاد بالمصادر :

At the end of a research report, you List all the sources from which your information was taken.

If you want to credit the source of your information and it is a website, you can type:

→ **Website link** A highlighted picture or word, when pressed, take you to another site and is known as (Hyperlink)

Evaluation : **Complete** A highlighted picture or word, when pressed, take you to another site.



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General review on the Second axis (Digital safety and security precautions)

- Lesson objectives:** By the end of this lesson the student will be able to:
- **Define** some technological problems and ways to solve them.
 - **Explain** the different types of sources that can be used for Internet research.
 - **Uses** advanced search engines and search tools

Strategy:

Teaching aids:

Warm Up :

Brainstorming - dialogue and discussion - cooperative learning
Electronic whiteboard - Student's book- presentation

After what you learned in the second axis How do we maintain the safety and security of ourselves and our data when using information and communication technology tools?

Lesson Presentation

Write and Compare:-

Write a sentence for each of the following pairs of phrases to explain the connection between them, then compare your sentences with the sentences of a colleague.

- Personally Identifiable Information and Phishing
- Harmful content and reliable sources
- Copyright and documentation

Read and answer:-

1. What is personal data?
2. List three ways to keep your personal information safe online.
3. What is an example of multi-factor authentication (MFA)?
4. What actions should you take if you think an online profile is fake?
5. Why would you include a quote in a research paper?
6. List two reasons for using multiple sources in your research.
7. How can you ensure that a search result is as accurate as possible?
8. How should paraphrased text differ from the author's original text?



Evaluation : Evaluate the students' answers